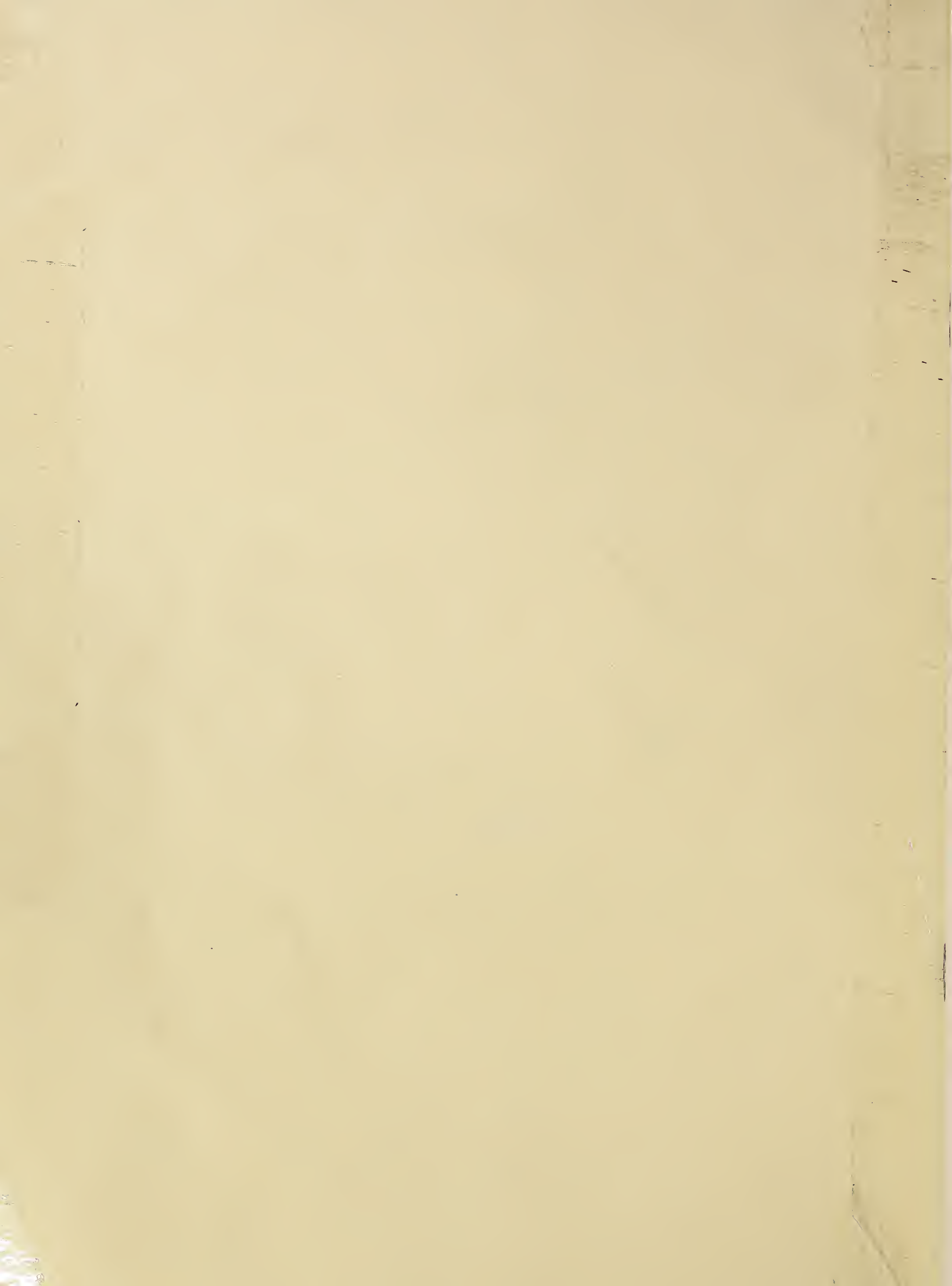


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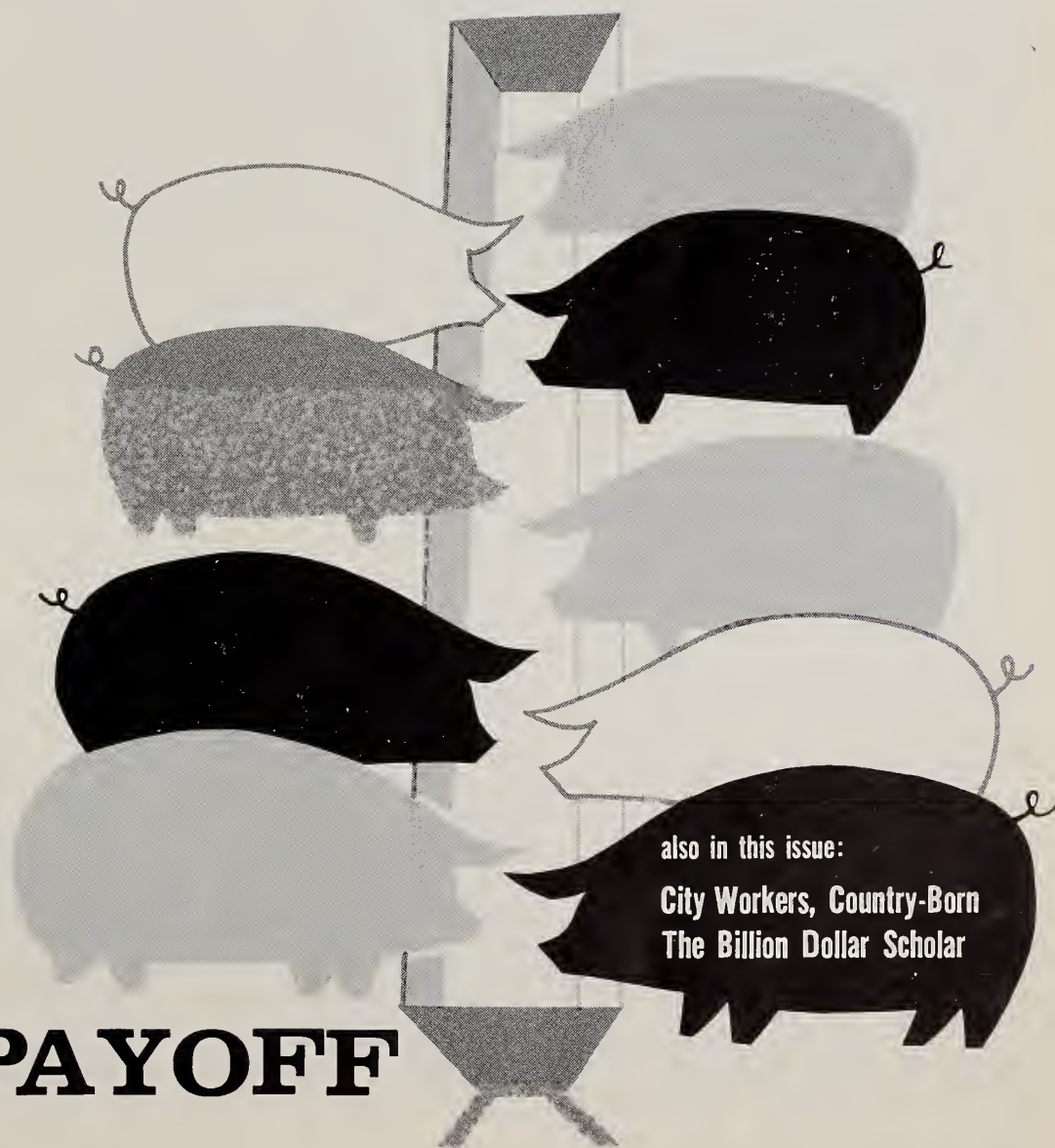


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THE FARM INDEX

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PIG PAYOFF



Economic Trends



ITEM	UNIT OR BASE PERIOD	'57 - '59 AVERAGE	1963		1964		
			YEAR	OCTOBER	AUGUST	SEPTEMBER	OCTOBER
Prices:							
Prices received by farmers	1910-14=100	242	242	242	232	236	236
Crops	1910-14=100	223	237	235	226	228	232
Livestock and products	1910-14=100	258	245	248	237	244	239
Prices paid, interest, taxes and wage rates	1910-14=100	293	312	311	313	313	312
Family living items	1910-14=100	286	298	297	300	299	300
Production items	1910-14=100	262	273	272	269	270	269
Parity ratio		83	78	78	74	75	76
Wholesale prices, all commodities	1957-59=100	—	100.3	100.5	100.3	100.7	100.8
Commodities other than farm and food	1957-59=100	—	100.7	100.9	101.1	101.1	101.5
Farm products	1957-59=100	—	95.7	95.1	93.6	95.7	93.8
Food, processed	1957-59=100	—	101.1	102.2	101.0	102.2	101.7
Consumer price index, all items ¹	1957-59=100	—	106.7	107.2	108.2	108.4	—
Food	1957-59=100	—	105.1	104.9	106.9	107.2	—
Farm Food Market Basket:²							
Retail cost	Dollars	—	1,013	1,012	1,021	1,028	—
Farm value	Dollars	—	374	374	383	388	—
Farm-retail spread	Dollars	—	639	638	638	640	—
Farmers' share of retail cost	Per cent	—	37	37	37	38	—
Farm Income:							
Volume of farm marketings	1957-59=100	—	115	176	117	133	175 ³
Cash receipts from farm marketings	Million dollars	32,247	36,925	4,727	2,925	3,486	4,605 ³
Crops	Million dollars	13,766	17,045	2,701	1,315	1,717	2,583 ³
Livestock and products	Million dollars	18,481	19,880	2,026	1,610	1,769	2,022 ³
Realized gross income	Billion dollars	—	41.7	—	—	41.6	—
Farm production expenses	Billion dollars	—	29.2	—	—	29.1	—
Realized net income	Billion dollars	—	12.5	—	—	12.5	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	5,585	552	419	494	—
Agricultural imports	Million dollars	3,977	4,011	374	315	338	—
Land Values:							
Average value per acre	1957-59=100	—	—	127 ⁴	135 ⁴	—	—
Total value of farm real estate	Billion dollars	—	—	148.1 ⁴	154.9 ⁴	—	—
Gross National Product:⁵							
Consumption ⁵	Billion dollars	456.7	583.9	587.2	—	627.5	—
Investment ⁵	Billion dollars	297.3	375.0	377.4	—	404.5	—
Government expenditures ⁵	Billion dollars	65.1	82.0	82.8	—	86.5	—
Net exports ⁵	Billion dollars	92.4	122.6	122.8	—	130.0	—
	Billion dollars	1.8	4.4	4.2	—	6.5	—
Income and Spending:							
Personal income, annual rate	Billion dollars	365.2	464.1	472.7	494.9	497.9	498.6
Total retail sales	Million dollars	17,105	20,536	20,716	22,266	22,175	21,536
Retail sales of food group	Million dollars	4,159	4,929	4,943	5,234	5,301	—
Employment and Wages:⁶							
Total civilian employment	Millions	64.9	68.8	69.1	70.5	70.3	70.3
Agricultural	Millions	6.0	4.9	4.9	4.8	4.8	4.7
Rate of unemployment	Per cent	5.5	5.7	5.6	5.1	5.2	5.2
Workweek in manufacturing	Hours	39.8	40.4	40.6	40.9	40.6	40.7
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.46	2.47	2.52	2.56	2.53
Industrial Production: ⁶	1957-59=100	—	124	126	134	134	132
Manufacturers' Shipments and Inventories:^{6, 7}							
Total shipments, monthly rate	Million dollars	28,736	34,774	35,214	37,168	37,264	—
Total inventories, book value end of month	Million dollars	51,158	58,807	59,322	60,673	60,948	—
Total new orders, monthly rate	Million dollars	28,374	35,036	35,354	37,509	38,004	—

¹ Beginning Jan. 1964, new ser. ² Av. ann. quantities of farm foods based on purchases by wage-earner and clerical worker households. Figures now include single persons living alone so quantities are smaller than in the old market basket. ³ Preliminary. ⁴ As of July 1. ⁵ Ann. rates seasonally adj. 3rd qtr. ⁶ Seasonally adj. ⁷ Rev. ser.

Sources: U.S. Department of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Department of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Department of Labor (The Labor Force and Wholesale Price Index).

Farmers worry about two kinds of prices—the prices they get and the prices they pay. It isn't enough for their own prices to go up. If the cost of inputs—the goods and services they buy—goes up faster, farmers still wind up with fewer dollars to live on.

Production expenses have increased an average of more than 3 per cent annually over the last decade. However, the rise this year wasn't as much as in previous years. Through the first three quarters of 1964, total expenses went up \$300 million or 1 per cent above the \$29.2 billion of a year earlier. After these expenses were subtracted from farmers' realized gross income of \$41.9 billion (annual rate based on the first three quarters of 1964), roughly \$12.4 billion remained in realized net income.

Most of the increase in production expenses during 1964 was due to higher charges for depreciation, interest and taxes. The costs of goods and services of nonfarm origin were about 2 per cent higher than in 1963. But, expenditures for items of farm origin—feed, seed and livestock—declined from a year ago. However, the reduction in these prices was a minus factor to the farmers who produce these inputs.

Total production expenses are expected to rise again in 1965. Larger expenditures are indicated particularly for feed, livestock, fertilizer, interest, taxes and depreciation.

Input by input, here's a rundown on what happened to costs this year (or in 1963 if 1964 figures aren't yet available).

Farm real estate. The average price per acre for farm real estate went up 6 per cent in the



year ended July 1, 1964, a gain equal to that of the preceding year.

Average market values on March 1, 1964, were about \$48,000 per farm. The average was roughly \$33,600 in 1959. The rise reflects a steady increase in the average size of farms as well as the gain in value per acre. About half of all purchases of farmland nowadays are added to existing operations.

The total value of farmland and service buildings on March 1, 1964, was \$136.4 billion, compared with \$128.8 billion a year earlier.

Farm Labor. During the last decade, farm wage rates have increased an average of 3 per cent annually. This year, they rose 2 per cent from the 1963 level. The average for the nation is expected to be about 90 cents an hour for 1964. In contrast, production workers in manufacturing earned an average of \$2.52 an hour during the first eight months of this year, up 3 per cent from the corresponding period a year ago.

Higher farm wage rates are expected in 1965 with the gain exceeding the 1963-64 rise. However, the need for labor will continue to drop as more machines and other labor-saving devices are used instead and farms are combined into larger units.

Farm power and machinery. Prices paid by farmers for tractors, farm machinery and equipment during the first three quarters of 1964 were about 2 per cent higher than in the same period of 1963.

Total expenditures for the repair, replacement and operation of farm machinery and motor vehicles (including fuel and oil) were nearly \$6.4 billion in 1963, up \$137 million from the preceding year. These expenses ac-

the agricultural outlook

counted for about 22 per cent of total farm production expenses in 1963.

Building materials. Expenditures for materials and nonfarm labor used in new construction, additions and repairs of farm service buildings totaled around \$1.3 billion in 1963, about the same as in 1962.

Fertilizer. Farm use of nitrogen, potassium and phosphorus in 1963 came to roughly 9.5 million tons—13 per cent above the previous year. Preliminary estimates indicate a gain of 10 per cent in 1964 over last year.

The average cost per ton of plant nutrients in 1963 was about the same as the 1962 figure and roughly 10 per cent below the 1957-59 average.

Pesticides. Wholesale prices remained fairly steady during 1964. Agricultural use of pesticides was generally above the level in 1963. The largest gain this year was in the application of herbicides.

Feed. Prices received by farmers for feed grains during 1964-65 (year beginning October 1) probably will average a little above a year earlier. Prices for soybean meal are expected to be somewhat lower than the relatively high level in 1963-64 and 1962-63.

The October 1 supply (carryover plus 1964 crops) of all feed concentrates, including feed grains, is down roughly 5 per cent from a year earlier—feed grains are off 6 per cent from last year. However, supplies of high-protein feeds are up about 3 per cent.

Seed. Prices farmers paid for seed used in fall plantings were generally lower in mid-September than a year ago. Supplies of most kinds of seed were larger than in 1963.

Feeder and replacement livestock. Prices paid by farmers for all livestock this fall averaged 9 per cent below a year ago. Prices for stocker and feeder steers have risen little since early June.

At the same time, prices received for fat cattle rose sharply and provided feeders with the widest margins they have had since the

autumn months of two years ago.

Taxes. Farm real estate levies in 1963 totaled nearly \$1.5 billion, up 5 per cent from 1962. The average tax per acre was \$1.43 last year, compared with \$1.36 in 1962. Taxes on farmland are expected to be higher this year than in 1963.

Taxes on farm personal property also have been rising steadily. In 1963, they totaled \$295 million.

Interest. Farmers will pay nearly \$2 billion in interest on their real estate and production loans, this year, up \$200 million from 1963. The rise is due largely to a sharp gain in farmers' use of credit—interest rates remain relatively stable.

Total farm debt (excluding CCC loans) is expected to total \$36.4 billion by the end of 1964, \$3.4 billion higher than in 1963.

Insurance. Farmers paid an estimated \$2 billion in premiums for farm business and personal insurance and social security this year.

Expenditures for insurance will probably increase again in 1965 due mostly to broader coverage and increases in the amounts of existing policies. Premium rates as a whole are likely to rise only slightly.

Although the volume of purchased goods and services used in farming has increased since 1957-59, the use of nonpurchased inputs (largely unpaid operator and family labor) continues to drop. Farm output per unit of input (a measure of overall productivity in agriculture) has slipped a little this year from the record in 1963 but is still at a high level. The estimate for 1964 is 8 percentage points above 1957-59. The 1963 figure was up 10 points.

The nonfarm sector of the economy has played an important role in the greater productivity of agriculture by supplying many of the inputs farmers have substituted for their own labor. These items include such things as machinery and equipment, fertilizers, an array of chemicals for pest and weed control, feed additives and custom services like feed grinding and mixing.

DECEMBER-MAY PIG CROP AND HOG SLAUGHTER¹

Year	Commercial slaughter ²	Federally-inspected sow slaughter ²	Barrow and gilt slaughter	Estimated pig crop remaining for slaughter	Commercial slaughter/pig crop estimate
		1,000 head			Per cent
1953	35,100	2,542	32,558	31,974	102
1954	39,355	2,977	36,378	36,742	99
1955	44,946	3,922	41,024	41,524	99
1956	42,107	3,531	38,576	38,912	99
1957	39,975	3,266	36,709	37,321	98
1958	40,071	3,209	36,862	37,318	99
1959	46,068	3,778	42,290	42,726	99
1960	39,911	3,204	36,707	35,186	104
1961	41,460	3,368	38,092	38,781	98
1962	41,978	3,274	38,704	38,696	100
1963	44,479	3,579	40,900	40,200	102

¹ For 48 states.² Based on 6½ months slaughter and adjusted for earlier marketing each year.

PIG PAYOFF: ADVANCE SLAUGHTER ESTIMATES

Statisticians and economists make a good team. For many jobs, the first group gathers figures and the other analyzes them to predict what is likely to happen in the future. The results can be of considerable use to farmers in planning production and marketing.

Estimating hog marketing and slaughter on the basis of current and past pig crops is a good example. When estimates of the number of deaths, farm slaughter and gilts held for farrowing are subtracted from the latest pig crop, the result is generally within a per cent or so of the figure for commercial hog slaughter five or six months hence.

The procedure the specialists follow to estimate hog slaughter seems simple on first glance. But there are a few problems. During the past decade, a number of changes have taken place in hog production and marketing.

Nowadays, hogs are fattened faster, death rates are lower and fewer animals are slaughtered for farm use compared with 10 years ago. Thanks to a higher rate of gain, hogs usually go to market

from four to six weeks earlier than they did a decade ago. So, specialists assumed that in 1963 the December-May pig crop was sold from the last half of June through December. The June-November crop went to market from January through early June in 1964.

In 1953, the December-May pig crop was assumed to have been sold from the last half of July through the following January. In the same way, the June-November crop was slaughtered the following February through the first half of July.

In 1953, the December-May pig crop totaled over 47.9 million head. The death loss was close to 5.8 million; 5.6 million head were farm slaughtered and 4.6 million were placed in the breeding herd. About 32 million were left for slaughter as barrows and gilts. This was roughly two-thirds of the pig crop.

Compare these figures with the pig crop 10 years later. Pigs farrowed during December 1963-May 1964 numbered over 50.3 million. An estimated 4.4 million died, around 2.9 million were

slaughtered on farms and roughly 2.8 million were kept for breeding purposes. As a result, four-fifths of the original crop—40.2 million—remained for slaughter as barrows and gilts.

Several assumptions were necessary to make estimates of hog slaughter for 1953 through 1963. For instance, death loss figures are available only at the end of each year. So, this annual figure was divided between the December-May and June-November pigs.

For example, 8.2 million hogs died in 1963. This was roughly 9 per cent of the 93.9 million head born that year. So, 9 per cent was subtracted from the December-May crop of 50.3 million head and from the June-November crop of 43.6 million head.

Farm slaughter figures are regularly estimated by quarters. They have to be set up on a monthly basis according to the seasonal pattern of farm slaughter. Farm slaughter in the first quarter of 1963 was 36 per cent of all slaughter for the year; it was 7 per cent in the second quarter, 5 per cent in the third

and 52 per cent in the fourth. When adjusted to the annual slaughter pattern, the percentages from January through December were 20, 10, 6, 4, 2, 1, 1, 1, 3, 8, 17 and 27.

Each year, a number of gilts are kept on the farm to farrow litters the following year. When a large number of gilts are held back, the pig crop the following year is naturally a bigger one. The reverse happens when breeding herds are smaller than a year earlier.

An adjustment for gilts held back for breeding can be made by using the number of sows slaughtered under federal inspection. For example, 7 million sows were farrowed from December 1961 through May 1962. From February through August, 3.3 million sows were slaughtered under federal inspection. So, the sows remaining for slaughter in June-November numbered 3.7 million.

The number of sows that actually farrowed in the June-November period was 6.2 million. Subtracting the 3.7 million estimate of sows remaining from the previous farrowing period leaves 2.5 million gilts saved for farrowing from the previous year's June-November pig crop. (1)

Some Illinois Hog Producers Discover Cons of Confinement Cancel the Pros

After several years of trying confinement production of hogs, many Illinois farmers have mixed opinions about it. Some have given up entirely and gone back to pasture methods. This is the gist of the replies to a recent follow-up on an earlier study comparing production of hogs in confinement and in pasture. The study was made by ERS in cooperation with the Illinois Agricultural Experiment Station.

Fifty producers who had confinement systems when the first study was made in 1959 were contacted to see what changes they made between 1960 and 1963. Thirty-four responded.

Five of the 34 farmers were no longer producing hogs in confinement. And, they had gone back to pasture production despite their substantial investment in confinement facilities. The major reasons for the shift centered around the high labor requirements and build-up of disease in the confinement system. On the other hand, most of the farmers who were still producing hogs in confinement in 1963 planned to continue

doing so in the future.

The complaint of excessive labor needed for sanitation came from both the producers who quit and those who stayed in. Disposing of manure was the chief problem. Slotted floors are the usual solution for manure disposal. But they are difficult to install in existing buildings which most farmers were using to avoid investing any more capital than necessary. Keeping the buildings and lots clean was cited as difficult, too.

Producers named cannibalism (tail biting) as the second most important problem. They also had trouble ventilating the buildings and controlling flies. Some of the more minor problems mentioned were waste of feed, tender hides and difficulty in driving hogs. Also, hogs chewed the wooden members in buildings.

Farmers who remained in favor of confinement production listed the overall reduction of labor compared with a pasture system as the main advantage. They also liked the relative ease of observing, treating, weighing and sorting hogs in confinement. Several producers valued the opportunity to divert hog pasture to crops. Other advantages men-

DECEMBER-MAY PIG CROP ADJUSTMENTS

Year	December-May pig crop	Estimated number of hogs and pigs from December-May pig crop that:			Estimated pig crop remaining for slaughter as barrows and gilts	
		Died	Were slaughtered on the farm	Were held for breeding	Number (Net pig crop)	Per cent of December-May pig crop
	1,000 head		1,000 head		1,000 head	
1953	47,940	5,753	5,582	4,631	31,974	67
1954	52,852	6,025	5,100	4,985	36,742	70
1955	57,610	6,049	5,644	4,393	41,524	72
1956	53,124	5,206	4,881	4,125	38,912	73
1957	51,263	5,331	4,588	4,023	37,321	73
1958	51,354	5,392	4,395	4,249	37,318	73
1959	56,620	5,888	4,845	3,161	42,726	75
1960	47,282	5,012	3,724	3,360	35,186	74
1961	50,441	4,943	3,401	3,316	38,781	77
1962	49,692	4,870	3,086	3,040	38,696	78
1963	50,304	4,416	2,862	2,826	40,200	80

tioned were a higher volume of production, year-round marketing, more efficient feed conversion, more uniform gain, faster rate of gain, elimination of problems with mud and little or no need for bedding.

Farmers in the 1959 study produced an average of 900 head of hogs annually. The producers questioned in 1963 had marketed around 1,000 hogs the previous year. Half of them expected to increase their output even further by 1965. The anticipated gains in production averaged 54 per cent over 1962 levels. Only three farmers expected to produce less than 1,000 head annually in confinement by 1965.

Twenty-two of the producers surveyed fed complete rations to hogs in 1963. Only three of them were using controlled feeding. However, four farmers said they planned to adopt the practice within two years.

In general, the farmers in the survey had all made some improvements in practices and facilities from 1959 to 1963. (2)

Shift to Confinement Hog Production Tied in with Change to Complete Feed

Confinement production of hogs and feeding complete rations have, by and large, gone hand in hand in Illinois, according to a recent study by ERS in cooperation with the University of Illinois.

The study showed that most of a group of 45 Illinois farmers had fed shelled corn and a commercially-prepared protein supplement to their hogs free choice in a pasture production system. When they shifted to confinement production, many began to use complete feeds. By 1960, half the producers surveyed had changed. By 1963, four-fifths were feeding a complete ration.

Farmers who changed feeds said their hogs gained more rapidly and evenly on complete rations.

Some producers reported the prepared feed to be cheaper, too. They said they were able to reduce feed costs by using soybean meal as the only protein source.

In contrast, farmers who continued to feed shelled corn said they weren't convinced that the benefits of a complete ration offset the additional costs of processing. However, some of these producers were testing both forms of feed to see which was better suited to their operations.

Farmers in the Illinois study were well informed on differences in the nutritional needs of swine at various stages in production. They generally used feed with 16 per cent protein for pigs going into growing pens immediately after weaning. Rations containing 12 per cent protein were used for finishing hogs to market weight. Vitamins, antibiotics and other feed additives also were matched to the animals' requirements.

Making up different complete rations sometimes led to inefficient use of labor, the farmers said. Some producers prepared as many as three feeds for growing and finishing hogs, a fourth for creep feeding small pigs, a fifth for gestating sows, a sixth for lactating sows and a seventh for the breeding herd between litters. The complications of mixing all of these feeds caused a few farmers to abandon farm processing in favor of the services of a commercial operator.

Actually, hog producers don't have to use so many rations. Recent research in swine nutrition has shown that a farmer can do a good job with only a couple of different rations.

Producers in the study handled from 50 to 200 litters of hogs per year. A reasonably efficient rate of feed conversion requires at least 350 pounds of feed to produce 100 pounds of pork. This means that farmers handling 50 litters annually needed 150 to 160 tons of feed. Those with 200 litters required 600 tons. (3)

Sheep Numbers Continuing to Decline; Low Should Occur Within Two Years

Of all the different agricultural enterprises, sheep production most often bears the brunt of the increasing pressure on land use. As farmland is shifted into urban and recreational uses, the remaining acres go into more intensive farming—and flocks disappear.

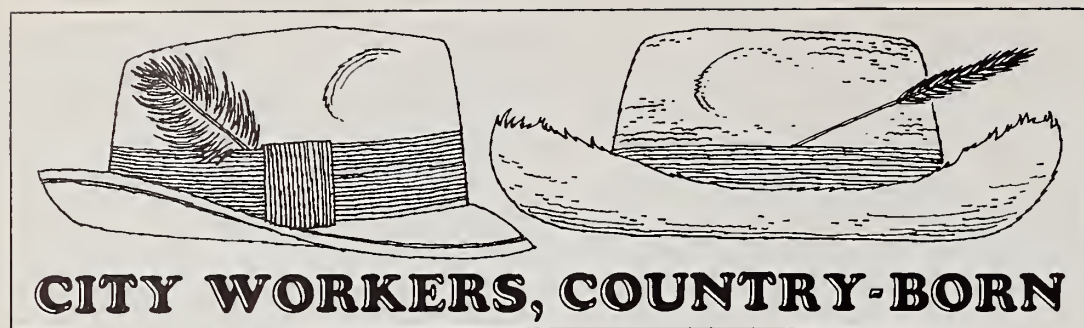
The decline in sheep numbers is expected to continue into 1965, and possibly 1966. However, by 1967 the low point in the current cycle should be reached and numbers probably will bottom out near 23 million head.

Whether the sheep inventory will rise much after the low point depends on several factors. On the plus side are: Promotion programs to spur sales of lamb and wool; advances in breeding, feeding and management; and a potential gain in demand for lamb and wool due to increases in population and income levels. On the other hand, the competition for use of farmland and the steady decline in use of lamb and wool per capita argue against any substantial expansion.

Per capita consumption of lamb and mutton was 4.9 pounds in 1963, compared with a 7-pound average in the 1940s. Use of lamb and mutton accounted for 3 per cent of total meat consumption last year. In 1945, lamb and mutton's share was 5 per cent. The drop is due to both a decline in popularity of lamb and intense competition from other meats.

Wool consumption has been slipping, too. It was 2.2 pounds per person in 1963, down from 5 pounds in the mid-1940s. Both wool and cotton are declining in their proportions of total fiber use because of the gain in popularity of man-made fibers.

The substantial risk of drought in the major sheep producing western states makes pasture conditions in the future uncertain, too. (5)



Born on a farm but working in the city? Chances are almost two out of three that the worker's collar is blue. Born off a farm? It's almost a tossup—white or blue.

A very important difference between white and blue is green—\$5,768 compared with \$4,350. These are the median incomes, respectively, of men in white and blue collar jobs in 1959. Similar differences exist for women. However, the figures don't mean that all the blue collar craftsmen, foremen, machine operators, service workers (including domestics) and nonfarm laborers necessarily make less money than a manager, proprietor, government official, or professional, technical, sales, or clerical worker.

Farm-born people who have come to the city are greatly underrepresented in white collar occupations at all ages. The job skills they learned on the farm, such as in construction work or in operation and repair of machinery, suit them for work as truck drivers, factory operatives, craftsmen, or laborers. They are accustomed to manual labor. And their average level of formal education is often too low for many types of white collar work without further training.

They apparently do just as well in finding a job in the city as the longer-established natives. At least there was no significant difference in unemployment rates during the business recession month of May 1958. Persons at a comparative disadvantage in education, training or seniority, such as migrants from farms, might be expected to be hardest

hit by layoffs. But their unemployment rate of 7.4 per cent was almost identical with that of their nonfarm born neighbors.

Once in the white collar category, farm-born workers are just about as likely to get the higher-status jobs as the nonfarm-born. Rather than being concentrated in clerical work or sales, they are professionals and technical workers just as often as their city-born neighbors.

All of these findings are based on the largest residence history sample ever available for a study of the progress of the farm-reared migrant. In 1958, data were collected for the population 18 years and older from 35,000 households all over the country.

In addition to comparing the farm-born and nonfarm-born to find differences in occupation, ERS researchers have used this sample to find differences in the distribution of workers among various industries. (The distinction here is between the task performed and the type of business in which the work is done.)

Among nonfarm residents, the farm-born are found in above average proportions in construction work, domestic household work, forestry-fishing-mining and in agriculture. (About 4 per cent of employed farm-born people living in nonfarm homes were working as farmers or farm laborers and foremen.) Employment differences between farm- and nonfarm-born are negligible in transportation-communications-public utilities, education, wholesale and retail trade and public administration.

The pattern is mixed in manu-

facturing, the largest single industry group. In all age groups above 35 the farm-born are underrepresented. But at younger ages they are found in above-average proportions.

Farm-born migrants are somewhat less likely to be wage or salary workers in service industries exclusive of education and domestic service.

The self-employed were tabulated as a separate group, regardless of industry, because of their special qualities of entrepreneurship, risk taking and independence. Farm-born migrants were found to be just as likely to go into nonfarm businesses for themselves as the nonfarm-born. (5)

Farmers Applying for City Jobs Rate Plus on Attitude, Minus on Education

Farmers have a plus going for them in seeking nonfarm employment—their willingness to work. But they also have a minus against them—less formal education on the average than their urban competitors.

This was the consensus of managers of 20 large industrial firms queried by the Michigan Agricultural Experiment Station and ERS in the summer of 1962. Their workers comprised 58 per cent of the employed manufacturing labor forces in Kalamazoo and Muskegon Counties, Michigan.

The managers didn't think of farmers as a unique group of employees. But they were judged by a set of standards for employee selection and promotion that sometimes worked for them, more often against them, in competing with urban workers.

In hiring or promoting a man the employers considered his years of formal education, absenteeism pattern, aptitude, attitude, commuting distance, health, job performance and other variables.

Education. One out of four firms in each of the communities

studied required a high school diploma for all jobs. The other firms were gradually raising the formal educational requirements for job applicants. Level of education was not generally considered in promotion policies for production workers, but did become important in advancement to supervisory positions. A few firms planned to consider formal education as one criterion for promotion of all employees.

Absenteeism pattern. Though nearly half the firms treated applicants who were part-time farmers the same as nonfarmers, one firm carefully checked the work history of part-time farmer applicants to avoid those who move seasonally from farm to nonfarm job. Eight of the 20 firms reminded part-time farmer applicants that the nonfarm job must have priority. None of the firms adjusted an employee's nonfarm work schedule to fit peak farm work periods. But a few employers were willing to grant annual vacations to coincide with planting or harvesting seasons if the employee's absence didn't interfere with the work schedule of the plant.

Commuting distance. Some firms with two otherwise equal applicants would hire the one who commuted the shortest distance to facilitate communication when rescheduling work shifts. The policy wasn't intended to discriminate against farmers, but probably did.

Aptitude, attitude and job performance. Seventeen of the firms saw no difference in on-the-job progress of farmers and nonfarmers. The other three were confident that farm people progress more rapidly than nonfarm workers. They said this was particularly true of young people. Farm-reared youth were thought to know how to work and to be more willing to work at the outset, while nonfarm youth took a few months to get used to the idea.

Several managers said workers with a farm background were more mechanically oriented than their urban counterparts. However, one said the difference in mechanical skill would likely decline as more nonfarm youth remodel and maintain autos and other mechanical equipment. (6)

Low Income Area Young Adults Match National Averages on Aptitude Tests

"Hill County" is a fictitious name for a very real, mostly rural county in the United States. It has lower incomes and fewer jobs than many counties. But it is not poor in terms of the basic ability of its young adults to learn and to profit from occupational training.

This was brought out by eight aptitude tests taken in the county by 97 out-of-school young adults 16-30 years of age and 205 high school juniors and seniors.

The 45 employed male adults tested averaged at or above the scores of the adult U.S. male population for every test except verbal comprehension. The categories they did well on were numerical ability, visual pursuit (of wiring diagrams, for example), visual speed and accuracy, space visualization, numerical reasoning, verbal reasoning, and manual speed and accuracy.

The 22 unemployed men scored lower than the employed men on every aptitude test except manual speed and accuracy. They were below the average for U.S. men in four of the eight tests. But they scored as well as the U.S. average on the numerical reasoning test, a measure of ability to analyze logical relationships and discover principles that is used to predict on-the-job trainability.

The 14 employed females made scores equal to or above the average for adult women in the U.S. on six of the eight tests. Verbal comprehension was below the U.S. average, as was true for all the

groups of "Hill County" residents tested. This test is usually an indication of general intelligence, because it measures one's ability to understand differences in meaning of words. But it can also indicate—especially when other test scores are so much better, as in this case—that the school system is not doing a very good job of teaching reading and writing.

The performance of the 16 unemployed women indicated aptitude levels slightly lower than those of the employed, but the differences were smaller than among males. They scored at or above the U.S. average in four of the eight tests, and close enough to the U.S. average on the numerical reasoning test to indicate that many of them can be trained for new occupations.

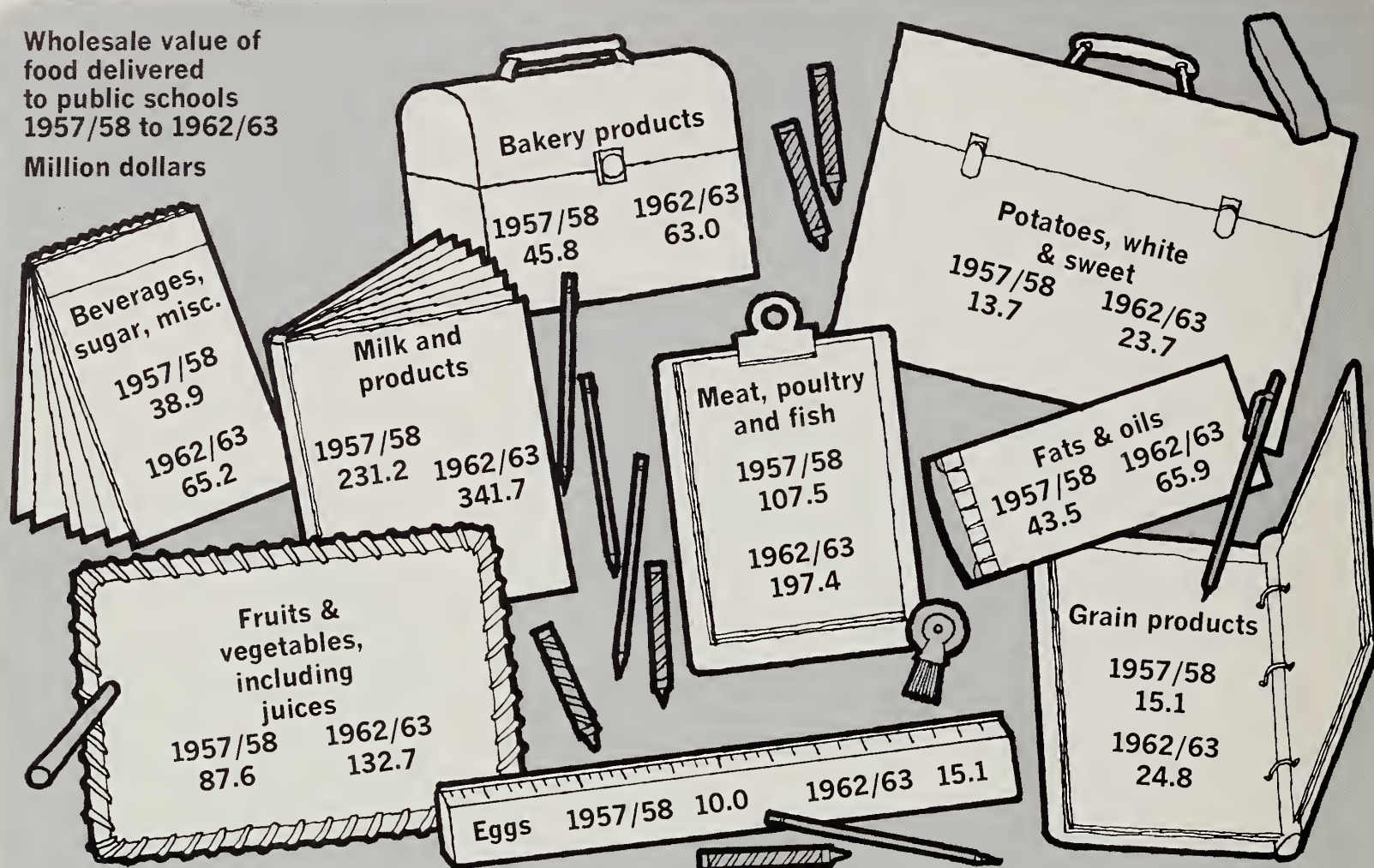
Aptitudes of the high school students were less favorable. When the eight test scores of all junior and senior students were compared with high school graduates throughout the country, they were below average on most tests.

They had excellent numerical ability (a straight-forward manipulation of figures).

However, they lacked the communication skills and ability to form and grasp ideas increasingly needed in most industrial and service occupations. The 97 boys scored in the lowest quarter in the nation in verbal comprehension and verbal reasoning. The 108 girls beat the boys, but only scored in the lowest third nationally.

The high school students did worse than the adults because they faced stiffer competition. "Hill County" schools haven't been able to match the general increase in educational quality across the nation. Unless the deficiency in the educational system is corrected, new job seekers from rural "Hill County" will lose out to the better educated from urban areas. (7)

Wholesale value of
food delivered
to public schools
1957/58 to 1962/63
Million dollars



THE BILLION DOLLAR SCHOLAR

When Johnny goes to school he takes the food industry along with him—to the tune of about \$1 billion a year.

That's the value of the food in the 3 billion meals served to the nation's public and private school children during the 1962-1963 school year.

Most of the meals are eaten in schools that take part in the National School Lunch Program, a joint venture of the U.S. Department of Agriculture and state agencies.

About three-fourths of the food used in the elementary and secondary schools was purchased in local markets in 1962-63. The federal government donated the remainder.

The school cafeteria is already an important part of the away-

from-home market for food.

Five years ago the amount of food used in lunch rooms in the public schools alone was worth \$597 million. By 1962-63 the figure had grown to \$929 million. Private schools added another \$77 million to the market. According to a recent study by the Economic Research Service, this market should be worth another \$250 million or so within the next decade.

The recent increase in food use came mostly from the combination of more schools providing lunches and bigger enrollments in the schools.

Most of the expanded use of food occurred within the framework of the school lunch program. Schools taking part in the federal program receive cash and com-

modity donations to help them serve well balanced, low cost lunches to students.

About three-fourths of all children in public elementary and secondary schools have NSLP lunches available to them. In private schools, the proportion is a little over a third.

The children pay from 25 to 30 cents, on the average, for plate lunches, though the price is apt to be a little higher in secondary schools than in the lower grades.

The schools served up milk and milk products—not counting butter—worth \$372 million in the year ending in June 1963. All but \$30 million was used by the public schools. Over 90 per cent of the milk came from local sources.

Fluid milk was worth \$285.2 million, or 83 per cent of the

total. Ice cream and then processed cheese were the next most important milk products.

All together, the milk and milk products accounted for more than 35 cents out of every dollar of purchased or donated foods used in the schools.

The dollar value of meat, poultry and fish served in the schools ran to almost \$215 million during 1962-63, or about 21 cents of the schools' food dollar. The public schools alone used up \$197.4 million of the total. Red meat—and especially hamburger—was the most important item in the group.

About 70 per cent of the meat, poultry and fish was purchased by the schools; the rest was donated by the government.

Five years earlier, the public school children consumed only \$108 million worth of meat, poultry or fish.

The third biggest item on the schools' shopping list was fruits and vegetables, including juices, and fresh, canned, frozen and dried items. Canned goods alone, worth \$99.6 million, accounted for 70 per cent of the total value. The value of all the fruits and vegetables, not including potatoes and sweet potatoes, came to more than \$141 million for the year.

Deliveries of fats and oils ran to slightly over \$70 million; bakery products were worth about as much.

Butter was the principal item on the fats and oils list, worth \$58.5 million during the year. Almost all of the volume came from government storehouses.

Bread was worth more than a third of the \$69.5 million total value of baked goods received by the schools.

The NSLP schools not only account for most of the student enrollment, but they use more food per pupil. Based on average daily attendance records, the NSLP schools served food worth \$32.67 per pupil during the year surveyed. In schools with other types of food service, the food ran to

\$31.45 per pupil on the average.

One reason for the difference is that schools participating in the government program receive a higher proportion of federally donated foods, as well as a cash reimbursement. This difference in turn results in lower lunch prices and a higher rate of participation by the pupils. Also, the NSLP schools emphasize complete plate lunch service, which may encourage the children to eat more.

When the specialists projected an added \$250 million for the school lunch market in the next decade, they pointed out that the increase could be even greater with some effort. If food services were made available to more schools, if more of the students were encouraged to take advantage of the lunches, this market would grow even more. (8)

Housewives Buy Potatoes to Fit Menu Until Sharp Price Drop Urges Switch

Housewives have come to recognize that potatoes are really a lot of different products with different cooking qualities. Producers and handlers, too, have fostered new and improved varieties, grading programs and quality standards.

An ERS analysis shows that the housewife will usually buy the potato that's tailor-made for her menu—keeping only one eye on price—unless the price of another type of potato goes so low she can't afford not to substitute.

The study covers May-June, the season when food stores are apt to have late spring potatoes from California and storage potatoes from Idaho and Maine. Normally at this season spring potatoes are priced about one-third above storage potatoes. When prices of spring potatoes decline by 10 per cent, consumers buy about 6 per cent more. However, when the price of storage potatoes goes down, the housewife will tend to buy fewer spring potatoes. (9)

Dates on the Moon Are Apt to Be Dry, Compact, Long Lasting and Worth It

Man's first icebox was the sun. And he's been using it ever since.

Long before Moses climbed Mount Sinai, farmers throughout the Middle East knew that dates, figs and other fruits could be preserved from one harvest to the next if most of the moisture was removed. What they didn't know, of course, was that harmful bacteria can't multiply nearly so fast in dried foods as in moist ones.

Sun-dried foods have been used down through the centuries by all sorts of people in all sorts of places. Our early colonists found the Indians drying meat and corn. British soldiers took dried potatoes and carrots along to the Crimean War. During our own Civil War, Union troops packed dried sausage mixed with peas. For the Klondike gold rush, dried potatoes were imported from Germany.

As any ex-GI can testify, World War II was fought from Pearl Harbor to the Rhine crossings on powdered milk, dried eggs and potatoes.

The oldest food-drying machine—the sun—is still used to dry most of our raisins, currants, apricots and pears. But manmade driers are taking over the processing of most other foods. The new methods—vacuum drying and foam spray drying—have been developed largely at utilization laboratories of the U. S. Department of Agriculture.

With each mechanical improvement, the list of foods that can be dried with little loss of flavor and nutrients gets longer. ERS economists predict that the food drying industry will continue to grow. For the military, for campers, even for our spacemen—wherever electric refrigeration can't go—the world's first big icebox and its man-made descendants are the answer. (10)

Tree Nuts Big During Holiday Season But Growing Stronger All Year Round

Deep down in the toe of a Christmas stocking there is bound to be a handful of almonds or walnuts. And atop the festive fruitcake—an array of pecans.

There is no doubt about it—the holiday season from Thanksgiving to Christmas is one of the “nuttiest” times of the year. But you’ll notice that nuts are finding their way onto more dinner tables in a greater variety of ways at other seasons of the year.

We’ve been eating more nuts than ever before. Since 1920, per capita consumption of tree nuts has increased more than 50 per cent, rising from about 1 pound a year to nearly 1.8 pounds in 1963. And no longer are tree nuts used exclusively by confectioners or for out-of-hand eating.

Almonds are becoming more and more important in prepared food mixes and frozen foods. Noodles almondine, green beans with almond slices, cake and frosting mixes using almonds, and a number of other prepared foods are finding their way into our everyday menus.

Almonds are now diced, sliced, slivered, blanched, roasted and salted so that there is a right form to meet almost every food need.

Pecans also pop up quite often in the U.S. household. As a matter of fact, pecans are the fastest growing tree nut on a per capita consumption basis. Since 1920, consumption has jumped nearly half a pound per person and pecans now total nearly a fourth of all the tree nuts we eat. Most pecans are found in bakery products; the baking industry used nearly 38 per cent of the total supply in 1961. But a large amount of pecans are also sold in the shell or in shelled, salted mixtures for nibbling. Candy and ice cream manufacturers also use pecans in many of their products.

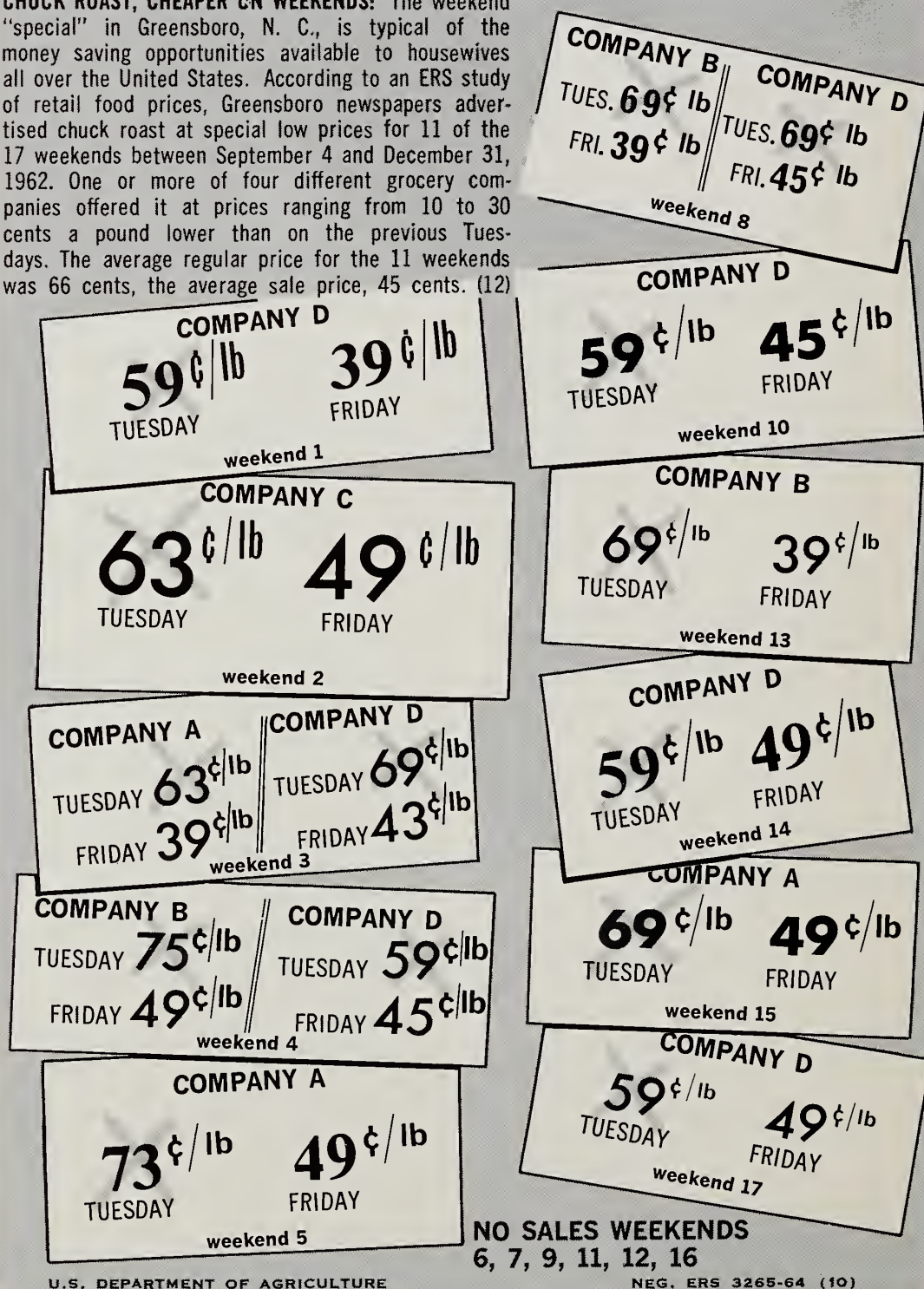
Walnuts are still sold mostly in the shell. But there has been a rapid growth in the popularity of vacuum-packed tins or cellophane-wrapped packages of shelled walnuts for use by housewives in home food preparation.

Of the tree nuts which aren’t grown domestically, cashews have recorded the largest consumption gains since the 1920s. The U.S. now takes more than half of the world’s cashew exports, an average of 29,133 tons per year be-

tween 1959-1962. Practically all of the cashews are used by the nut salting trade but they are becoming increasingly popular in the confectionary trade also.

In the years ahead, population increases will probably bring about ever greater demand for tree nuts. And while nuts are still so-called luxury items, it may be commonplace to find them on many American dinner tables—in main dishes or desserts—as incomes rise in the future. (11)

CHUCK ROAST, CHEAPER ON WEEKENDS: The weekend “special” in Greensboro, N. C., is typical of the money saving opportunities available to housewives all over the United States. According to an ERS study of retail food prices, Greensboro newspapers advertised chuck roast at special low prices for 11 of the 17 weekends between September 4 and December 31, 1962. One or more of four different grocery companies offered it at prices ranging from 10 to 30 cents a pound lower than on the previous Tuesdays. The average regular price for the 11 weekends was 66 cents, the average sale price, 45 cents. (12)



U.S. DEPARTMENT OF AGRICULTURE

NEG. ERS 3265-64 (10)

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FINANCING RURAL HOMES IN MISSOURI. D. Williams and L. A. Jones, Farm Production Economics Division, in cooperation with F. Miller, Missouri Agricultural Experiment Station. Mo. Agr. Expt. Sta. Res. Bul. 857.

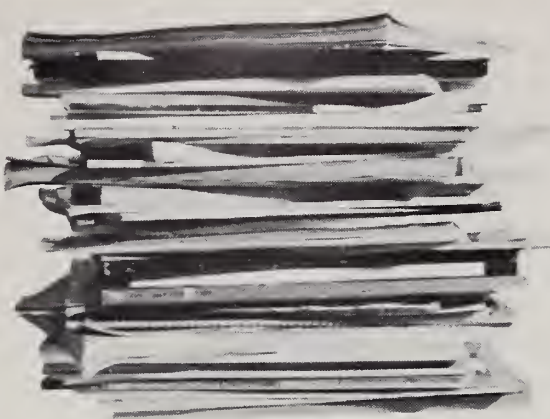
This study indicates that rural areas have access to relatively fewer sources of home mortgage financing and that amount and terms of housing credit are less favorable in rural areas than in larger towns and cities. (See November 1964 Farm Index.)

AVAILABILITY OF RURAL HOUSING CREDIT IN MONTANA. R. L. Sargent and J. R. Davidson, Montana Agricultural Experiment Station, in cooperation with L. A. Jones, Farm Production Economics Division. Mont. Agr. Expt. Sta. Bul. 586.

Residents of Montana's small towns and rural areas do not have as favorable housing credit as do people in larger towns and cities. Local banks are the only lending institutions in many rural areas and most of these banks have small resources.

FOOD SUPPLIES AVAILABLE BY COUNTIES IN CASE OF A NATIONAL EMERGENCY: A CIVIL DEFENSE STUDY. Economic Research Service and the Office of Civil Defense. AER-57.

This report is designed to supply rough estimates of the probable food supply within counties and states in the event they are cut off from outside food sources.



recent publications

The following publications are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from the Division of Information, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained from the issuing agencies of the respective states.

HOMEMAKERS' ESTIMATES OF HOW LONG FOOD ON HAND COULD BE MADE TO LAST: A CIVIL DEFENSE STUDY. M. H. Weidenhamer, Statistical Reporting Service. MRR-669.

If outside food supplies were cut off in an emergency, many U.S. households would be out of food within a few days. (See June 1964 Farm Index.)

HAY IN THE UNITED STATES: QUANTITIES GROWN IN A NORMAL YEAR, SURPLUS AND DEFICIT AREAS. M. R. DeWolfe, Marketing Economics Division. Statis. Bul. 349.

This study shows hay production patterns in the U.S. by locating production areas by the kinds of hay produced, surplus and deficit areas, and the quantities available for shipment. (See October 1964 Farm Index.)

COSTS OF FARM MACHINERY IN CROP PRODUCTION IN NORTH-WESTERN OHIO, BY SIZE OF FARM. J. Vermeer, E. Hole and B. A. Chugg, Farm Production Economics Division. ERS-175.

Cost per unit of owning and operating tractor-drawn and tractor-mounted equipment varied with size of farm. Large farms had lower costs per implement and per acre of use than medium-sized farms. (See June 1964 Farm Index.)

REVISED ESTIMATES ON NON-REAL-ESTATE FARM DEBT OWED TO NON-REPORTING CREDITORS, AND OF TOTAL NON-REAL-ESTATE FARM DEBT, 1949-64. F. L. Garlock and P. T. Allen, Farm Production Economics Division. ERS-191.

At the beginning of 1964, farm operators and landlords owed \$16.2 billion in loans not secured by farm real estate. Over 40 per cent of this amount was owed to creditors who do not report to regulatory agencies the amount of the loans they hold. (See November 1964 Farm Index.)

Numbers in parentheses at end of stories refer to sources listed below:

1. E. B. Hannawald, "Relation of Hog Slaughter to Pig Crops," Livestock and Meat Situa., LMS-138 (P); 2. R. N. Van Arsdall, Some Adjustments Made by Early Adopters of Confinement Production of Hogs, Ill. Agr. Expt. Sta. AE-4029 (P); 3. R. N. Van Arsdall, Processing and Distribution of Feeds for Hogs Produced in Confinement, Ill. Agr. Expt. Sta. AERR-72 (P); 4. Wool Situation, TWS-69 (P); 5. C. L. Beale, J. C. Hudson and V. J. Banks, Characteristics of the United States Population by Farm-Nonfarm Origin, AER (M); 6. R. A. Loomis, Farmers in the Nonfarm Labor Market, Mich. Agr.

Expt. Sta. Res. Rpt. (M); 7. N. H. Rude and M. R. Janssen (SM); 8. M. Kriesberg, The Market for Food in the Nation's Schools, MRR (M); 9. O. Hee, A Seasonal Potato Market: Area of Competitive Behavior (S); 10. K. Bird, Food Dehydration's Evolution to a Promising Peace Time Industry (S); 11. J. V. Powell, The Domestic Tree Nut Industries—An Economic Appraisal, AER (M); 12. J. Galvin (SM).

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THE FREEZING OF COMMERCIAL
BAKERY PRODUCTS: CURRENT PRACTICES,
PROBLEMS AND PROSPECTS. N. L. Rollag and R. V. Enochian,
Marketing Economics Division. MRR-674.

The freezing of bakery products permits the economies of large-scale production and allows bakers to have a supply of their products at all times without risking losses from staling.

ECONOMICS OF MILK MARKETING IN ALASKA. W. W. Jones, Marketing Economics Division. MRR-675.

Milk production in Alaska has increased about 126 per cent in the past 10 years. Still the high cost of producing milk in the state makes it economically feasible to obtain milk and milk products from wholesalers in the lower 48 states. (See July 1964 Farm Index.)

INTERSTATE HAULING OF CALIFORNIA-ARIZONA FRESH FRUITS AND VEGETABLES BY RAIL AND TRUCK. R. M. Bennett, Marketing Economics Division. MRR-673.

Three-fifths of the total fresh fruit and vegetable shipments sent to other states by the shippers interviewed were moved by rail, though more than half the volume of some commodities was handled by motor carriers.

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The Farm INDEX is published monthly by the Economic Research Service, U.S. Department of Agriculture. December 1964. Vol. III, No. 12

The contents of this magazine are based largely on research of the Economic Research Service and on material developed in cooperation with state agricultural experiment stations. All articles may be reprinted without permission. For information about the contents, write the editor, The Farm INDEX, Office of Management Services, U.S. Department of Agriculture, Washington, D. C. 20250. Use of funds for printing this publication approved by the Director of the Bureau of the Budget, May 24, 1962. Subscription orders should be sent to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 20 cents (single copy). Subscription price: \$2.00 per year; 75 cents additional for foreign mailing.

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